

## REMARKS

The Office Action dated April 19, 2005 and the advisory action dated July 26, 2005 have been carefully reviewed and the foregoing amendment and following remarks are made in consequence thereof.

Claims 1, 4, 7, 12, and 19-35 are pending in this application. Claims 1, 4, 7, 12, 22, 23, and 25-35 are allowed. Claims 19-21 and 24 are rejected.

The rejection of Claims 19-21, and 24 under 35 U.S.C. § 102(e) as being anticipated by Tomita (U.S. Patent No. 6,784,632) is respectfully traversed.

Tomita describes a positioning servo controller wherein the command response which is a response of a position deviation  $\theta_1$  with respect to the position command  $\theta_r$ , and the disturbance response which is a response of a position deviation  $\theta_2$  with respect to the disturbance  $T_d$  are calculated such that even when  $K_p$ ,  $K_d$ ,  $K_i$ , and  $K_g$  are adjusted so as to reduce the position deviation  $\theta_2$  caused by the influence of the disturbance  $T_d$ , the position deviation  $\theta_1$  in the command response is also changed together with the position deviation  $\theta_2$  in the disturbance response because the transfer function from the position command  $\theta_r$  to the position deviation  $\theta_1$  depends on only the same parameters. In another embodiment, the disturbance response in the transfer function of the positioning servo controller depends only on the denominator of the transfer function from the disturbance  $T_d$  to  $\theta_2$ . Notably, Tomita does not describe nor suggest a feed forward that forces the system output response to a collision to substantially equal the system response to the input control signal when the feed forward substantially equals zero.

Claim 19 recites a method of operating a servo system having an initial level of aggressiveness for responding to a collision and a predetermined desired level of aggressiveness for responding to an input control signal wherein the method includes “reducing the level of aggressiveness for responding to the collision...maintaining the desired level of aggressiveness for responding to the input control signal using an input control signal

feed forward that forces the system output response to a collision to substantially equal the system response to the input control signal when the feed forward substantially equals zero.”

Tomita does not describe or suggest a method of operating a servo system as recited in Claim 19. Rather, in contrast to the present invention Tomita describes a feedforward controller that outputs a value obtained by adding a value obtained by amplifying a value obtained by second-order differentiation of the position command  $\theta_r$ , by the feedforward gain  $K_{ff1}$ , to a value obtained by amplifying a value obtained by first-order differentiation of the position command  $\theta_r$ , by the feedforward gain  $K_{ff2}$  and the adjustment gain  $K_g$ , but Tomita does not describe or suggest reducing the level of aggressiveness for responding to the collision, and maintaining the desired level of aggressiveness for responding to the input control signal using a feed forward that forces the system output response to a collision to substantially equal the system response to the input control signal when the feed forward substantially equals zero. Accordingly, for at least the above reasons Applicants respectfully submit Claim 19 is patentable over Tomita.

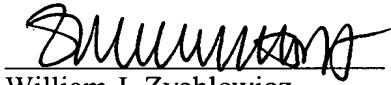
Claims 20, 21, and 24 depend from Claim 19. When the recitations of Claims 20, 21, and 24 are considered in combination with the recitations of Claim 19, it is submitted that Claims 20, 21, and 24 are likewise patentable over Tomita.

For the above reasons, it is requested that the rejection of Claims 19-21, and 24 as being anticipated by Tomita be withdrawn.

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In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

  
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